

Northwood and NetGuide

Connecting to the Northwood Network
2014—2015

Internet | Phone | TV

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For Questions or Assistance with Northwood Net:

ITS Service Center

- Submit a Service Request Online: its.umich.edu/help/request
- 4HELP@umich.edu
- 734-764-HELP (764-4357)
- its.umich.edu/help

For the Latest Updates & Information:

- its.umich.edu/northwood

About Northwood Net

Northwood Net provides three services to Northwood residents:

- Internet: up to 20Mb downstream and up to 5Mb upstream (actual speeds may vary)
- Telephone: UMphone
- Cable Television: UMTV

Cable Modem

The modem and cable outlet in your apartment connect your computer, analog phone, television, and other devices to the Northwood cable network. The modem is permanently mounted (upside down) to the wall. **Do not move the modem. It is university property and must remain in the apartment when you move out.**

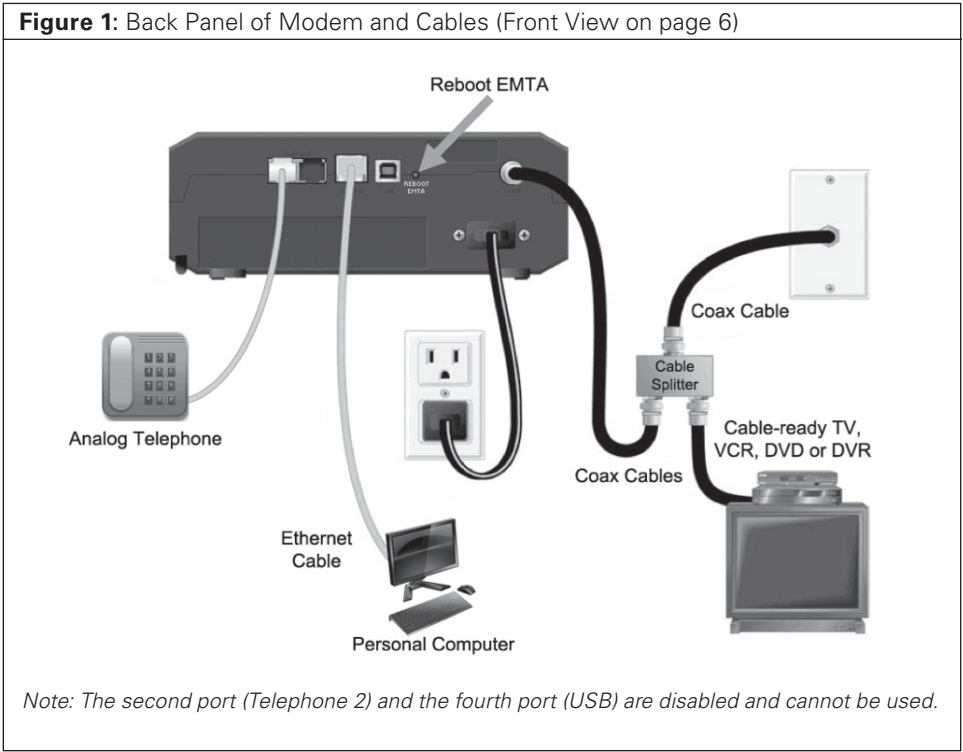


Figure 2: Cables You Need to Connect to Northwood Net		
A coiled grey Ethernet cable with RJ-45 connectors on both ends.	A coiled white telephone cord with RJ-11 connectors on both ends.	A black coaxial cable with a threaded connector on one end and a flat connector on the other.
Ethernet Cable (CAT5/RJ-45)	Telephone Cord (RJ-11)	Coaxial TV Cable

What You Need to Connect to Northwood Net

In addition to the modem in your apartment, you will need the following:

For Internet Service:

- Windows or Mac computer that meets recommended minimum system requirements. For a list of requirements, visit computershowcase.umich.edu/new-students/general.php.
- You may experience less than optimal performance with a computer that does not meet these requirements. Only minimal troubleshooting assistance for these systems will be available from the ITS Service Center.

To Connect using an Ethernet Cable:

- Ethernet cable to connect the computer to the modem. (Figure 2)
- A computer with a 10Base-T or faster Ethernet jack. Some computers, including the MacBook Air, may need an adapter or Network Interface Card (NIC).
- Ethernet hub or router to connect more than one device using a wired connection (optional). (Figure 3)

To Connect to Wi-Fi:

- A wireless card. Most laptops come with an internal wireless card. At a minimum the card should provide IEEE 802.11a/b/g protocols. Newer devices are capable of the more robust 802.11n.
- A wireless router (Northwood IV and V only). (Figure 3)

Figure 3:
Optional Equipment



Ethernet
Hub/Router



Wireless Router

For Telephone Service (UMphone):

- Analog telephone set and cord. See page 12 for more details.

For Cable Television (UMTV):

- Cable-ready television and coaxial cable. See page 13 for more details.
- A high-quality surge protector (recommended). Surge protectors prevent equipment failure caused by power outages and surges. If you do not use a surge protector, remember to unplug the modem, your computer, and other devices from the wall during severe weather, especially thunderstorms.

Connect to the Internet: A Quick Start Guide

Before you connect, make sure your computer meets requirements and you have all necessary equipment (page 2).

To use the Internet in a Northwood apartment:

1. Connect your computer to the cable modem (see below).
 - You can connect one personal computer (Windows or Mac) directly to the cable modem for Internet service.
 - For additional computers or devices, you will need an Ethernet hub or router (page 2). *Only residents in Northwood IV and V may use a wireless router.*
2. Register your computer with DHCP (page 4).
 - You must complete the registration process to connect to the Internet. **You will be able to connect to the DHCP registration service page but nothing else until your device is registered.**
 - If you are not able to successfully register, you may need to configure your computer, based on its operating system. Refer to Troubleshooting DHCP Registration for instructions (page 7).
3. Connect to wireless (page 5).
4. Connect and register additional devices (page 6).

The cable modem only has one port for an Internet connection. If you have multiple devices, follow these additional steps to connect your Ethernet hub or router.

- Connect the router to the modem and follow the router's user manual for directions on configuration (page 3).
- Register the device on the Network Registration page or by emailing the ITS Service Center (page 4).
 - Your router may not work until you complete this registration process. If your router is setup to bridge only, it does not need to be registered.
 - Note: The ITS Service Center can assist with registering your router but will not provide additional technical assistance with personal routers.

Connect Your Computer to the Cable Modem

You can connect one personal computer (Windows or Mac) directly to the cable modem for Internet service. To connect more than one computer or device, you will need an Ethernet hub or router. You can purchase an Ethernet hub or router and cable at any store that sells electronics, including the Computer Showcase (computershowcase.umich.edu).

1. Turn off and unplug your computer.
2. If you are not using a hub or router:
 - Plug one end of an Ethernet cable into the modem's port labeled Ethernet and the other end into the computer's Ethernet port.

If you are using a hub (a.k.a. switch or wired router):

- Plug the hub's power cord into the electrical outlet.
- Plug one end of an Ethernet cable into the modem's port labeled Ethernet and the other end into the proper port on the hub according to the hub user guide.
- Plug one end of another Ethernet cable into an open Ethernet port on the hub and the other end into your computer's Ethernet port.

If you are using a wireless router (Northwood IV and V only):

- Set up the wireless router according to the directions (page 5).
3. Follow the directions in the next section: Register Your Computer with DHCP (page 4).

Register Your Computer with DHCP

To use your connection, you will need to register your computer with DHCP. DHCP is a service that configures and manages IP addresses. When you register, your device will be assigned an IP address, which is required to access the Internet.

If you receive an error during the registration process, refer to Troubleshooting DHCP Registration (page 7).

Before You Register

As a condition of activating a connection to the cable network from your residence, you will be required to agree to the terms and conditions of the U-M Network Proper Use Agreement for University Housing Residents (itcom.itd.umich.edu/network/reshall-proper-use.html).

DHCP Registration Steps

Your internet connection will not work until you complete this registration process!

You must complete the DHCP registration from each computer connected to the modem in your apartment. **You will be able to connect to the DHCP registration service page but nothing else until your device is registered.**

1. Open your web browser
2. Go to netreg.it.umich.edu
3. Read the University of Michigan Acceptable Use Policy and select **I Accept**.
4. Enter your username and umich password and click **Login**.
5. MAC Address: The computer's MAC address will be indicated. If it is not, Click **Detect**.
6. Description (Optional): Enter a descriptive name, such as "Jane's PC".
7. Device Type: The device type will be indicated. If it is not, select a device type.
8. Click **Register**.

You should receive a confirmation message stating that registration was successful.

See Troubleshooting DHCP Registration (page 7) if you have any problems with this registration procedure.

Can't access the Internet?

Delays are possible when many people are registering simultaneously. Try again later or refer to Troubleshooting TCP/IP on page 11.

If you still have problems, contact the ITS Service Center:

- Submit a Service Request Online: its.umich.edu/help/request
- 4HELP@umich.edu
- 734-764-HELP (764-4357)
- its.umich.edu/help

Connect to Wireless Internet

Community Centers

- The MWireless network is available in all of the Northwood community centers:
 - 1000 McIntyre
 - 2150 Cram Place
 - 1588 Cram Circle
- Before using MWireless, you must configure your computer and other wireless devices. You will only need to configure each device once. MWireless is the most secure and fastest wireless network on campus, and is available in most university buildings. For detailed instructions for your operating system, visit itcom.itd.umich.edu/wireless/connect.
- Visitors without a username and password may access the Internet using MGuest, a limited wireless network.

Northwood IV and V Apartments

- A wireless router is necessary to provide wireless Internet connections in Northwood IV and V apartments.
- The ITS Service Center can assist with registering your router but cannot provide additional technical assistance for personal routers.

What You Need

- Wireless router. (Figure 3)
- Computer with built-in wireless networking support (most new computers have this) or a wireless network adapter.
- An operating system that supports wireless networking, such as Mac OS, Windows 7 or 8.

Install Your Router

1. Connect one end of an Ethernet cable to the Ethernet port on the cable modem and the other to the Internet port on the router.
2. Follow the router's user manual for directions on configuration.
3. Check the router's status panel to see if the IP address begins with 10. If not, a connection or configuration problem exists and must be resolved before you can continue. Refer to your router's user manual.
4. From your computer, select the network that you just set up, and proceed to Register a Game Console, Router, or Other Device on the next page.

Register a Game Console, Router, or Other Device

After setting up a game console, router, or other device that connects to the Internet, you must register that device. *Note: If your router is set up to bridge, it does not need to be registered.*

Register your device by going to netreg.it.umich.edu and typing in the MAC address of their game console manually.

If you need help registering a device, send the following information in an email to 4HELP@umich.edu **from your U-M email account**:

- Name
- Uniqname
- Name and the WAN MAC address of the device (The location of the WAN MAC address is unique to each device. Refer to the device's documentation for instructions on how to locate the address.)

Register Your Wireless Router (Northwood IV and V only)

You may be able to register your wireless router yourself:

1. Go to the Network Registration page at netreg.it.umich.edu.
2. Authenticate with your uniqname and UMich password. Once authenticated, the router will be automatically registered.
3. Wait 30 minutes and release/renew the router's IP address using its control panel; or unplug it from the electrical outlet, wait a few seconds, then plug it in.

If you can't reach the registration page, try accessing it from a computer connected directly to the modem. Failures to reach the registration page from behind the router may indicate a problem with how the router or the connected computer is configured.

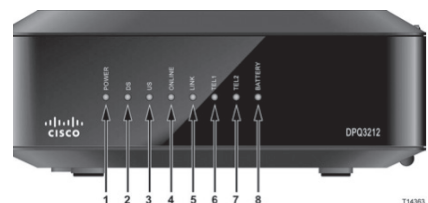
Troubleshooting

Troubleshooting the Modem

The front panel of the modem provides status LEDs that indicate levels of operation.

1. **POWER** – Illuminates continuously when there is AC power.
2. **DS** (Downstream) – Indicates the status of the connection for receiving data. Illuminates continuously during normal operation; blinks to indicate the unit is scanning for the downstream signal.
3. **US** (Upstream) – Indicates the status of the connection for sending data. Illuminates continuously during normal operation.

Figure 4: Front View of the Modem



4. **ONLINE** – Illuminates continuously when the modem is registered on the network and fully operational. This indicator blinks to indicate one of the following conditions: the modem is booting up and not ready for data; the modem is scanning the network and attempting to register; the modem has lost registration on the network and will continue blinking until it registers again.
5. **LINK (USB Port)** — Illuminates and flashes when an Ethernet cable is plugged into the Ethernet port.
6. **TEL 1** – Illuminates continuously when VoIP service is enabled. Blinks when line 1 is in use.
7. **TEL 2** – Disabled.
8. **BATTERY** —Illuminates solid green to indicate the battery is charged. Blinks to indicate the battery charge is low. The LED is off when operating from battery power, when the battery charge is depleted, or the battery is defective.

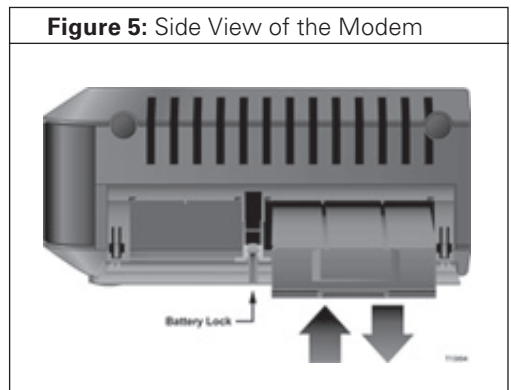
Verify the following:

1. The plug to your modem AC cord is properly inserted into an electrical outlet.
2. All cables are properly connected, and that you are using the correct cables (page 3).
3. The POWER, DS, US, ONLINE, TEL 1 LED status indicators are illuminated. If they are not illuminated, reset the modem.

How to Reset the Modem:

1. Shut down your computer and other connected Internet devices.
2. Using the tip of a pen or paper clip, press the REBOOT EMTA button (on the back of the modem) and hold down for at least 3 seconds. Release.
3. It will take a few minutes for the unit to recycle and the LEDs to illuminate.

You can also reset the modem by unplugging it from the electrical outlet and removing the battery for two minutes and then reconnecting (Figure 5).



Troubleshooting DHCP Registration

When attempting to reach the registration page, you may see this error message: *Cannot connect to host.*

This error appears when the browser automatically opens a default home page and you are not yet registered with the DHCP service. Refer to the Get Help section on the back cover of this booklet.

If you get an error message saying that registration has failed, you may need to configure your computer. (page 8)

If you continue to get an error after completing the configuration steps, check the message at the very bottom of the page in small print. Write the error message down completely before seeking assistance from the ITS Service Center.

Steps to Configure Your Computer

The configuration steps are different for each operating system:

- Windows Vista, 7, or 8 – page 8
- Mac OS 10.4 (Tiger) – page 10
- Mac OS 10.5 (Leopard), 10.6 (Snow Leopard), 10.7 (Lion), 10.8 (Mountain Lion), or 10.9 (Mavericks) – page 10

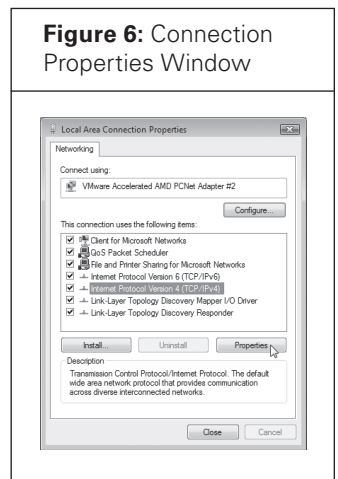
Windows Vista, 7, or 8 Configuration Instructions

Part One – Network Setup

Begin by connecting your computer to the modem (or hub/router). Turn on your computer (and hub/router).

1. *Windows Vista or 7:* From the **Start** menu > Click **Control Panel** > Click **Network and Internet**.
DON'T SEE THIS? You probably have your Control Panel window set to Classic View.
Windows 8: From the **Start** screen, type **Control Panel**. Under Apps, click **Control Panel**.
2. Click **Network and Sharing Center**. From the Task list on the left,
Windows Vista: Click **Manage Network Connections**.
Windows 7 or 8: Click **Change Adapter Settings**.
3. *Windows Vista or 7:* Double-click **Local Area Connection**. In the Local Area Connection Properties window, click **Properties**. If you receive a dialog box requesting your permission, click **Continue**. *Windows 8:* Double-click **Ethernet**.
4. In the Properties window:
 - a. Select **Internet Protocol Version 4 (TCP/IPv4)**.
CAUTION: Do not select Internet Protocol Version 6 (TCP/IPv6).
 - b. Click **Properties** (Figure 6).
5. In the Internet Protocol Version 4 (TCP/IPv4) Properties window (Figure 7):
 - a. Make sure the settings are:
 - Obtain an IP address automatically.
 - Obtain DNS server address automatically.
 - b. Click **OK**.
6. Click **Close** in the remaining open windows.

Figure 6: Connection Properties Window

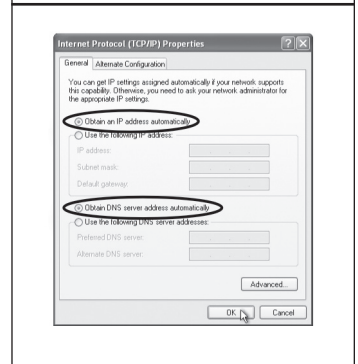


Part Two – Get Your Provisional IP Address

1. *Windows Vista or 7:* From the **Start** menu > Click **All Programs** > Click **Accessories**.
Windows 8: From the Start screen, type **Command**.
2. Right-click on **Command Prompt** and select **Run as administrator**.
3. Click **Continue** (for *Vista*) or **Yes** (for *Windows 7 or 8*).
4. In the Command Prompt window (Figure 8):
 - a. Type **ipconfig /all** (you must have a space between the "g" and the "/").

- b. Press **Enter**. You'll receive a long list of networking information. Look for Ethernet adapter Local Area Connection (*Vista or 7*) or for Ethernet (*Windows 8*).
 - c. Type **ipconfig /release** (you must have a space between the "g" and the "/").
 - d. Press **Enter**. The IP address for your Ethernet adapter will become 0.0.0.0
 - e. Type **ipconfig /renew** (you must have a space between the "g" and the "/").
 - f. Press **Enter**. The IP address should change to begin with 10.
5. If your IP address:
 - Begins with 10., type **exit** then press **Enter**.
 - Begins with anything other than 10., repeat steps 2-4. If you still do not get an address beginning with 10., see Troubleshooting TCP/IP (page 11).
 6. Complete the DHCP Registration Steps (page 4). If your registration is successful, complete Part Three below.

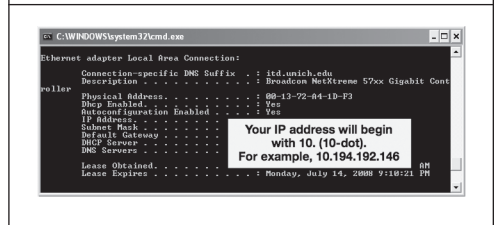
Figure 7: Internet Protocol Properties Window



Part Three - Final Registration Steps

1. Wait 10-15 minutes.
2. *Windows Vista or 7*: From the **Start** menu > Click **All Programs** > Click **Accessories**.
Windows 8: From the **Start** screen, type **Command**.
3. Right-click on **Command Prompt** and choose **Run as administrator**.
4. When Windows requests your permission, click **Continue** (for *Vista*) or **Yes** (for *Windows 7 or 8*).
5. In the Command Prompt window:
 - a. Type **ipconfig /release** (you must have a space between the "g" and the "/") and press **Enter**.
 - b. Type **ipconfig /renew** (you must have a space between the "g" and the "/") and press **Enter**.
 - c. Type **exit** and press **Enter**.
6. Wait 10-15 minutes.
7. Restart your computer.

Figure 8: Command Prompt Window



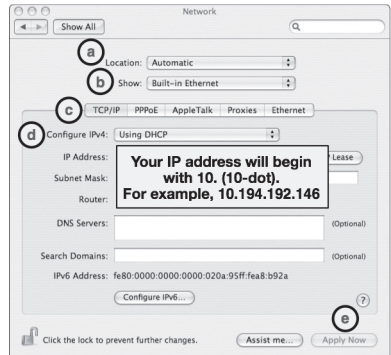
Mac OS 10.4 (Tiger) Configuration Instructions

Part One – Network Setup and Get Your Provisional IP Address

Begin by connecting your computer to the modem (or hub/router). Turn on your computer (and hub/router).

1. Under the Apple menu, select **System Preferences**.
2. In the System Preferences window, click **Network**.
3. In the Network window (Figure 9).
 - a. From the Location pull-down menu, select **Automatic**.
 - b. Select **Built-in Ethernet**.
 - c. Mac OS X 10.4 only: Click the **TCP/IP** tab.
 - d. From the Configure pull-down menu, select **Using DHCP**.
 - e. Click **Apply Now**.
4. Press **Enter**. The IP address should change to begin with 10.
5. If your IP address:
 - Begins with 10., close the Network preferences window. Proceed to DHCP Registration Steps (page 4).
 - Begins with anything other than 10., repeat steps 1-3. If you still do not get an address beginning with 10., see Troubleshooting TCP/IP (page 11).
6. Complete the DHCP Registration Steps (page 4). If your registration is successful, complete Part Two below.

Figure 9: Mac 10.4 Network Window



Part Two - Final Registration Steps

1. Wait 10-15 minutes.
2. Restart your computer.

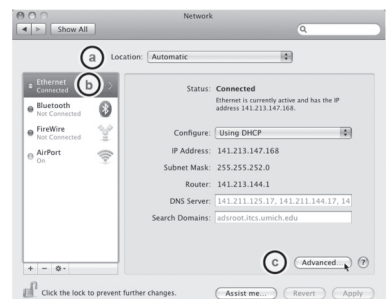
Mac OS 10.5 (Leopard), 10.6 (Snow Leopard), 10.7 (Lion), 10.8 (Mountain Lion), or 10.9 (Mavericks) Configuration Instructions

Part One – Network Setup and Get Your Provisional IP Address

Begin by connecting your computer to the modem (or hub or router). Turn on your computer (and hub/router).

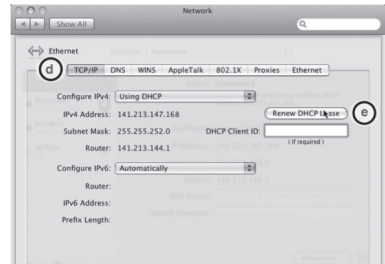
1. Under the Apple menu, select **System Preferences**.

Figure 10: Mac 10.5-10.9 Network Window



2. In the System Preferences window, click **Network**.
3. In the Network window (Figure 10):
 - a. From the Location pull-down menu, select **Automatic**.
 - b. Select **Ethernet**.
 - c. Click the **Advanced** button.
 - d. Click the **TCP/IP** tab (Figure 11).
4. Complete the DHCP Registration Steps (page 4). If your registration is successful, complete Part Two below.

Figure 11: TCP/IP Tab



Part Two - Final Registration Steps

1. Wait 10-15 minutes.
2. Restart your computer.

Troubleshooting TCP/IP

After checking all physical connections, try the following tips in the order they are listed. Try to reconnect after each.

1. Make sure the computer is properly configured. See Steps to Configure Your Computer (page 8).
2. Reset the cable modem (page 7).
3. Restart your computer.
4. Repeat the final registration steps listed for your operating system.
5. Check your IP address:
 - If your IP address starts with **169**, you may not have network connectivity or the DHCP service may be down.
 - If your IP address starts with **10**, you have connectivity, but you need to register (or re-register) your computer with the DHCP service.
 - If your IP address starts with **67**, you have connectivity and a working connection, but there may be something wrong with the particular service or website you are trying to reach. Try going to several different websites or using more than one Internet application to help determine which service is affected. Wait 10-15 minutes and try again.

Connect to UMphone

To connect your telephone, plug the RJ-11 cord on your analog telephone into the first port on the cable modem (**Telephone 1/2**). Your telephone line is already configured for UMphone. *Note:* Telephone Port 2 is disabled and cannot be used.

Features include:

- Unlimited campus and local calls
- Long distance calling by:
 - Authorization code (authcode) – individually assigned 7-digit number that ensures personalized and secure billing
 - Calling card
- Caller ID
- Call Waiting with Caller ID
- 3-Way Calling
- Call Transfer (on-campus or local calls)
- Last Number Redial (if redial key is on phone)

All telephone lines in Northwood Apartments have a number in the 734 area code beginning with 565. For example: 734-565-1234.

To find your:

- Telephone number
- Authcode for making direct-dialed long distance calls
- Detail of calls made with authcode and charges
- Voice mail user guide

Go to *itcom.itd.umich.edu*, click:

UMphone Student Services
Phone Numbers, Authcodes & Billing

 and log in with your unickname and UMICH password.

Feature	Instructions
3-Way Calling	To Add Third Party: Press TAP, hear special dial tone, dial number of third party. If Third Party Answers: Announce conference, press TAP. If Busy or No Answer: Press TAP twice.
Call Transfer	To Transfer Call: Press TAP, hear special dial tone, dial 7-digit transfer number. If Answered: Announce call, replace handset. If Busy or No Answers: Press TAP twice.
To Connect to Call Waiting	Hear call waiting tone: press TAP. To return to original party: press TAP.
Note: On some phones the TAP key may be labeled FLASH or LINK. If no key is available, you can quickly press the switchhook.	

Calls FROM a 565 Telephone	Dial:
Emergency (Fire, Police, Medical)	911
Campus Safety and Security	763-1131
Local and Campus	7-digit number
Domestic Long Distance*	1 + area code + 7-digit # (wait for beeps) + authcode
International Long Distance*	011 + country code + city code + # (wait for beeps) + authcode
U-M Operator-Assisted Long Distance Calls	0

*You can use a pre-paid calling card for long-distance instead of your authcode, if you choose.

continued

Calls FROM a 565 Telephone	Dial:
Campus Directory Assistance	0
Telephone Customer Service	763-2000
Non-U-M Directory Assistance	1+ area code + 5551212
AT&T Operator Assistance	00

Calls TO a 565 Telephone	Dial:
From another 565 telephone	565-xxxx
From a non-565 campus phone	9+565-xxxx
From a local telephone	565-xxxx
From an out-of-area telephone	1-734-565-xxxx

1-900 and 1-700 numbers cannot be dialed from your apartment telephone. Collect calls to your telephone cannot be accepted.

Opt-In Voice Mail

If you do not already have voice mail on your telephone, you can request it by submitting the form at: itcom.itd.umich.edu/telephone/students/voicemail.php

Connect to UMTV

UMTV Requirements

- Your television set must be cable-ready.
- UMTV offers digital programming only. An old-style, analog television set must have a Clear QAM-compliant converter box to work with the UMTV system. The ITS Service Center cannot provide technical assistance for converter boxes.

Setting up your TV to receive UMTV channels

1. Connect a coaxial cable from the cable splitter to the input port on the back of your cable-ready TV. Gently insert the center pin into the port and then screw down the outer ring.
2. Connect the TV power cord to the electrical outlet and turn on the TV.
3. Using your TV remote, select Menu and then select and run the Auto-Setup feature. Refer to your user manual for additional set-up instructions.

UMTV Channel Lineup

See itcom.itd.umich.edu/umtv/channel-lineup.html

You can also download a pdf version.

Connecting Additional Devices

DVD players, DVRs, and game consoles can be used with UMTV but they are not supported by UMTV staff. You will need to follow the directions in each device's user manual for setting up, operating, trouble-shooting and repair.

Note: If your DVR is compatible with signals transmitted in a Clear QAM format, then it will be able to receive and record all of the UMTV digital channels. (There is one exception with a TiVo DVR. See "Will a TiVo DVR work with UMTV?" at itcom.itd.umich.edu/umtv/faq.html.)

If an Internet connection is required for any additional devices, connect the devices to a router or wireless network, and register your devices (page 6).



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Presented by Housing & Information and Technology Services
2014-2015

Get Help

For questions or assistance with Northwood Net,
contact the **ITS Service Center**:

- Submit a Service Request Online:
its.umich.edu/help/request
- *4HELP@umich.edu*
- 734-764-HELP (764-4357)
- *its.umich.edu/help*

For the latest updates and information:
its.umich.edu/northwood

Note: ITS consultants and Housing are not able to troubleshoot or make repairs to any additional networking equipment other than that which is provided as part of the cable service.

If it is necessary to enter your apartment to make repairs, an appointment will be scheduled at a mutually convenient time. Please make sure your computer and modem are readily accessible to the technician.